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ABSTRACT

The labor market information gathered in this two-year study will guide the development of vocational education programs at Columbia Junior College (California) over the next 10-year period. This document contains a summary of the Mountain County labor market area. It includes geographic and demographic descriptions of the area, analyses of the characteristics of the labor market and the labor force, projections of manpower needs, and a summary of the local labor market. The implications of this data for the vocational programs at Columbia are also discussed. The document concludes with a series of graphs illustrating the total number of job slots by curricular area as related to the instructional programs at Columbia Junior College. Survey methodology is reported in a related document. (DC)

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SUMMARY OF MOUNTAIN COUNTY LABOR MARKET AND ITS IMPLICATIONS FOR VOCATIONAL PROGRAMS AT COLUMBIA JUNIOR COLLEGE

Part I. of Labor Market Planning for
Vocational Education Programs of
Columbia Junior College
August, 1974

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INTRODUCTION

Basic to any vocational training program is current labor market information. With the completion of this two year project, Columbia Junior College has a data bank pertaining to the local labor market for the first time in its history. The work of the staff in gathering this information, meeting employers throughout the College service area, analyzing the data and identifying directions for existing programs and potential new ones is invaluable. It is this work that will guide the development of Vocational Education at Columbia Junior College over the next ten year period.

To all those who worked so hard to bring this project to fruition, we can only say, a job well done. The College is limited now only by the creativity of its staff and the allocation of its resources to meet the needs of our local service area, both students and emplcyers.

Harvey B. Rhodes

ACKNOWLEDGMENTS

It is always difficult to extend proper thanks for hard work and dedication to everyone connected with a project the size and extent of this one. Those who read this publication will understand how both were necessary in the two years of effort.

First, I would like to thank the Employment Development Department in Sonora and the EDD Research Department in San Francisco for their assistance in securing the labor market information which comprises a substantial portion of Sections One, Two and Three of this report. Their assistance in providing this information allowed us to depend upon one central office for much of the information contained in these sections and allowed for a source of data which could be duplicated by other like geographical areas.

Secondly, the administrative staff at Columbia Junior College needs mention here because their enthusiasm throughout this project gave all of us the impetus to begin and continue driving toward a goal that seemed a long way off. Dr. Harvey Rhodes, Dale Bratten and Jon Hagstrom from beginning to end have questioned and pushed and acted at those times when we needed it most.

Dr. Patricia Hertert from the Yosemite Junior College District office stepped in to give of her time and her foresight early in the project. Her direction is evident throughout this report; without her our efforts would have been much less successful, as she worked with us continually to aim us in directions fruitful for future planning.

I would like to particularly thank Kathy Kile, my secretary for the last year and a half. She put up with many time-consuming and boring tasks that had to be done while at the same time her ability to create form out of chaos is evident throughout. Many of the tables on the following pages are of her design.

And finally, the vocational staff at Columbia Junior College, those who actually did the survey and analyzed the material deserve special attention. It was this group who labored hundreds of hours pounding the streets to identify the businesses and job slots described in this report. Jerry Lyon, Mac Frost and Irving Cobb, instructors in business, heavy equipment and forestry respectively, and Mildred Schick, retired teacher and student of motel management, all worked extremely hard to gather this information. When they first looked at the task ahead of them, the hours of work, they realized the only way to accomplish this purpose was to pull together and go. This they did. As we all look back, I think we realize that we are better for it both professionally and personally.

To all these people and many more, I say thank you for your direction and help.

Phil Swearingen, Director
Cooperative Vocational Education

USER INFORMATION

This Labor Market Survey is divided into three parts as follows:

Part I - Summary of Mountain County Labor Market Survey and its Implications for Vocational Programs at Columbia Junior College.

This summary is intended to bring together the pertinent information pertaining to the characteristics of the labor market and its implications for program development. This summary will receive wide distribution for readers who do not have a need for the reference tables and detailed analysis. To facilitate reader use, an appendix has been added to this summary showing the table of contents and lists of tables which appear in the other parts.

Part II - Labor Market Planning for Vocational Education Programs at Columbia Junior College.

This volume consists of: (1) a description of the four county area surveyed; (2) characteristics of the labor market; (3) characteristics of the labor force; and (4) labor market projections affecting vocational programs at Columbia Junior College. It is intended for internal and agency use within the Labor Market Area, and for those using the Labor Market Survey Model which was developed to meet the needs of rural isolated areas with similar needs.

Part III - Basic Reference Information Pertaining to the Tuolumne, Calaveras and Western Alpine Labor Markets.

This part comprises the computer tables resulting from the processing of all survey instruments completed during the survey. A limited number of copies have been produced and these are primarily for use by agencies and schools in the immediate labor market area.

Users will also want to make use of California Manpower Development - 1972-75 prepared by the Employment Development Department of the Health and Welfare Agency of the State of California. This report was prepared in 1974 in order to provide projections of occupations trends to facilitate decision making and provide information useful in evaluating training programs. It contains statewide data only. It can be secured through the local Employment Development Office.

Users who are interested in the procedures used to gather and analyze labor market information should consult Labor Market Identification Model available from Columbia Junior College.

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SUMMARY OF THE MOUNTAIN COUNTY LABOR MARKET AREA

I. DESCRIPTION OF THE AREA

Geographical Area Surveyed

The service area for Columbia Junior College encompasses approximately 4,000 square miles within the Yosemite Junior College District. It also serves counties which are not a part of the district, but contiguous to Tuolumne County - namely Calaveras, Alpine and Mariposa.

The mountain counties served by Columbia Junior College are not part of a larger labor market reporting area or Standard Metropolitan Statistical area and therefore, limited information concerning the area as a whole is regularly reported. Although the Rural Manpower Service of the Employment Development Department carried out the Tuolumne County Manpower Survey in October of 1971, no similar information was available on neighboring counties. Because detailed information on specific employers was not available for College use from the Employment Development Department survey, a complete standardized labor market survey for each county in the service area to assure comparable base data was decided upon between January of 1973 and April of 1974. Accordingly, the College staff gathered labor market information from three mountain counties; Tuolumne County, Calaveras County and the western portion of Alpine County. It is anticipated that the Yosemite region of Mariposa County will be surveyed in the near future.

Size of Population

The mountain counties encompassed have shown considerable growth since the 1960's. Recent growth figures for the year-round population are as follows:

TABLE I

TOTAL POPULATION OF PLANNING AREA
July 1, 1971, July 1, 1972, and July 1, 1973
WITH ANNUAL CHANGE

	July 1, 1971 (revised)	July 1, 1972 (revised)	July 1, 1973 (provisional)	Annual Change 1971-72		Annual Change 1972-73	
				Number	Percent	Number	Percent
Alpine	600	600	600	--	.0	--	.0
Calaveras	14,100	14,500	15,200	400	2.8	700	4.8
Mariposa	6,700	7,000	7,400	300	4.5	400	5.7
Stanislaus	199,200	204,200	207,800	5,000	2.5	3,600	1.8
Tuolumne	23,500	24,100	25,500	600	2.6	1,400	5.8
The State	20,296,000	20,518,000	20,741,000	222,000	1.1	223,000	1.1

Year-round population figures tell only part of the story in that all mountain counties are prime recreation areas and experience great increases in population during the summer months and on weekends during the remainder of the year. State and National Parks and forests abound and government is the largest employer throughout the area.

Characteristics of Population by Age

A review of the age characteristics of the four county area reveals slight differences from county to county in percentages in each age group. In comparing the four county averages with State of California averages, it is interesting to note that all counties are below the State average in persons below the age of 25. Likewise, all counties exceed the State averages from ages 55 and over. The average for the State of California for this age group is 17.5% of the total population as compared with 26.9% in the four county area. Age groups between 25 and 54 more closely approximate State averages.

II. CHARACTERISTICS OF THE LABOR MARKET

Size of the Labor Force

The growth of the labor force continued throughout the College service area. When comparing 196' Census figures with 1970 figures, a range of 2% growth in the civilian labor force to 68% growth in Alpine County can be noted. The growth in Alpine County can be directly attributed to the Bear Valley resort area. The growth rate in the civilian labor force in Tuolumne and Calaveras Counties more nearly parallels the growth rate of the general population.

TABLE II

COMPARISON OF CHANGE IN OCCUPATIONAL CATEGORIES (1) (2)
BETWEEN 1960 AND 1970

CIVILIAN LABOR FORCE

	1960	1970	Change	% Change
Tuolumne County	5419	8172	+ 2753	51%
Calaveras County	3865	4712	+ 847	22%
Alpine County	129	2.7	+ 88	68%
Mariposa County	2178	2224	+ 46	2%

(1) A discrepancy will be noted when comparing the Civilian Labor Force data reported in the 1960 Census and that of the 1970 Census in that the 1960 Census counted workers 14 and over while the 1970 Census counted workers 16 and over.

(2) Tuolum e County Manpower Survey, October 1971.
Prepared by the Rural Manpower Service Office.

Change in the Economic Structure of Mountain Counties

In the last ten year period, a number of shifts have occurred in the occupational structure throughout the College service area.

1. Tuolumne County

In Tuolumne County, the greatest increase in occupational categories have occurred in construction, government, services and real estate, finance and insurance. Occupational categories in which the work force is diminishing are agriculture, mining, and lumbering. These are the traditional main-stays of the county.

2. Calaveras County

In Calaveras County, the greatest increase in occupational categories have occurred in the same areas as Tuolumne County. Government and education, construction, wholesale and retail trade, and services have added to most employees while manufacturing has dropped in half from 1960 to 1970. Like Tuolumne County, agriculture, mining, and lumbering are part of this manufacturing decline.

3. Alpine County

The largest increase in employees in Alpine County has been in Government, while services, wholesale and retail trade have increase slightly. There has been almost no change in construction, and there is insufficient long term information to map the changes in manufacturing.

4. Mariposa County

Mariposa County has experienced different occupational shifts than the other three mountain counties. Government and educational services have increased, but less than the other counties. Wholesale and retail have increased and manufacturing has stayed at much the same level. Construction has declined, and there is insufficient information to determine the change in services.

Seasonality as a Continuing Condition of the Labor Market

Seasonal factors play a dominant role in the economy of all areas within the College service area.

In all counties studied, employment patterns also show the seasonality of employment. This results from the small size of the economy and the dominance by activities that are in varying degrees seasonal in nature. At the present time, the highest period of employment is during the summer months when use of recreation areas and accessibility to the high country for lumbering is a its peak. It is anticipated that the employment year will be extended with the additional development of winter recreation facilities, second homes, and retirement centers.

Employment Rates

As of the 1970 Census, all four counties studied are well above the 6% annual unemployment rate designated by the federal government as the level for depressed areas. All counties have substantially higher annual average unemployment rates than the State or National averages.

Base data for Tuolumne, Calaveras and Mariposa Counties exists from 1970 to the present. No data exists for Alpine County.

TABLE III

MONTHLY UNEMPLOYMENT RATES FOR 1970-1973
For Tuolumne, Calaveras and Mariposa Counties

	Tuolumne County								Calaveras County								Mariposa County							
	1970		1971		1972		1973		1970		1971		1972		1973		1970		1971		1972		1973	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
January	950	11.1	1550	17.7	1175	13.9	1250	14.5	350	7.1	725	13.7	575	11.3	625	11.4	275	11.1	350	13.9	325	12.4	250	9.5
February	1075	12.2	1325	15.2	1250	14.6	1150	13.4	400	7.8	625	11.9	600	11.5	600	11.1	325	12.9	325	13.0	325	12.4	275	10.4
March	1025	11.5	1225	14.1	1125	13.2	1225	14.1	350	6.9	600	11.3	550	10.3	750	13.9	425	16.3	500	18.7	425	15.2	275	10.4
April	775	9.0	925	10.9	1025	12.1	1100	12.6	375	7.2	500	9.5	600	11.2	625	11.8	300	11.7	350	13.3	275	9.6	275	9.9
May	525	6.6	750	8.8	825	9.7	875	10.1	275	5.3	575	10.6	575	10.3	525	9.8	225	8.0	300	10.6	225	7.0	300	9.8
June	575	6.6	700	8.1	750	8.7	825	9.3	275	5.1	525	9.5	575	10.0	400	7.1	225	6.6	275	8.4	250	7.3	225	6.6
July	550	6.3	675	7.7	600	7.0	800	9.0	375	6.7	600	10.5	500	8.8	450	7.6	175	5.0	225	6.5	200	5.6	200	5.6
August	700	7.9	625	7.2	600	7.0	675	7.6	325	6.7	450	8.1	425	7.5	400	6.8	175	5.0	200	5.7	200	5.6	175	4.9
September	525	6.1	575	6.6	675	7.7	675	7.5	350	6.3	300	5.6	300	5.6	375	6.6	175	4.0	150	4.4	150	4.9	150	4.6
October	525	6.3	550	6.5	675	8.2	575	6.7	350	6.5	350	6.7	350	6.5	375	6.6	175	6.3	200	7.1	175	6.2	200	7.5
November	750	9.0	650	7.8	1100	12.6	975	11.1	425	7.9	475	9.0	475	8.7	500	8.8	200	8.2	200	7.8	250	9.3	250	9.2
December	1125	13.1	925	10.9	1375	15.2	1050	11.9	675	12.1	575	11.0	550	10.0	750	12.9	325	12.9	325	12.6	275	10.6	375	13.5
ANNUAL AVERAGE	750	8.7	875	10.2	925	10.8	925	10.6	375	7.0	525	9.8	500	9.2	525	9.2	250	8.8	275	9.5	250	8.4	250	8.4

A comparison of 1970 through 1973 unemployment figures with the 1960 unemployment indicates that unemployment has been a continuing condition.

The Employment Development Department identifies the following major manpower problems related to employment rates in general: (3)

--A population of working age which exceeds the number of available jobs.
--A lack of permanent job opportunities for all but the highly skilled and experienced workers.

These problems account for a high youth unemployment rate as reported by the Employment Development Department.

III. CHARACTERISTICS OF THE LABOR FORCE

All data concerning the characteristics of the labor force in the four mountain county area was derived from a summation of Census information prepared by Lawrence Laboratory, University of California at Berkeley for the U.S. Department of Labor, Manpower Administration. Since Census data was gathered in the spring of the year, this information generally reflects the characteristics of the year round population. All data pertains to persons 16 and older.

Labor Force Participation Rate

The labor force participation rate indicates the percentage of the total population age 16 and over who are considered a part of the labor force. The average for all persons in the four county area over 16 years of age is 53%. When comparing this to the California State average of 59.4%, it will be noted that these mountain counties show a labor market participation rate less than the State average. Alpine County is the only county to exceed the State level. This lower rate probably results from the high percentage of older persons who reside in the area.

An analysis of the ethnic composition of the labor force reveals that 98% of the total labor force is white. Small groups of Blacks, Spanish American and other races will be noted in the labor force, but these are very small in number. Unfortunately, the characteristics of native Americans are not described in the Census and no comparable data is available for this group.

(3) Employment Development Department - Annual Review

TABLE IV

EMPLOYMENT STATUS FOR PERSONS 16 YEARS AND OVER
TOTAL, MALE AND FEMALE, BY RACE AND ETHNIC GROUP (4)

TUOLUMNE COUNTY	TOTAL	RACE AND ETHNIC GROUP: WHITE #	WHITE %	BLACK #	BLACK %	OTHER RACES #	OTHER RACES %	SPANISH AMERICAN #	SEX: MALE #	MALE %	FEMALE #	FEMALE %
Total Both Sexes, 16 Years & Over	16,340	15,901	97%	231	1%	208	1%	1,242	8,644	53%	7,696	47%
Total Labor Force	8,179	8,034	98%	9	0%	136	2%	481	5,379	66%	2,800	34%
Labor Force Participation Rate	50.1	50.5		3.9		65.4		38.7	62.2		36.4	
Civilian Labor Force	8,172	8,027	98%	9	0%	136	2%	481	5,372	66%	2,800	34%
Employed	7,428	7,305	98%	9	0%	114	2%	424	4,840	65%	2,588	35%
Unemployed	744	722	97%	0	0%	22	3%	57	532	72%	212	28%
Unemployment Rate	9.1	9.0		0.		16.2		11.9	9.9		7.6	
CALAVERAS COUNTY												
Total Both Sexes, 16 Years & Over	10,119	9,876	98%	69	1%	174	2%	526	5,241	52%	4,878	48%
Total Labor Force	4,737	4,671	99%	9	0%	57	1%	263	3,326	70%	1,411	30%
Labor Force Participation Rate	46.8	47.3		13.0		32.8		50.0	63.5		28.9	
Civilian Labor Force	4,712	4,646	99%	9	0%	57	1%	263	3,301	70%	1,411	30%
Employed	4,278	4,250	99%	9	0%	19	1%	242	2,948	69%	1,330	31%
Unemployed	434	396	91%	0	0%	38	9%	21	353	81%	81	9%
Unemployment Rate	9.2	8.5		0.		66.7		8.0	10.7		5.7	
ALPINE COUNTY												
Total Both Sexes, 16 Years & Over	330	231	70%	0	0%	99	30%	0	166	50%	164	50%
Total Labor Force	217	170	78%	0	0%	47	22%	0	143	66%	74	34%
Labor Force Participation Rate	65.8	73.6		0.		47.5		0.	86.1		45.1	
Civilian Labor Force	217	170	78%	0	0%	47	22%	0	143	66%	74	34%
Employed	194	165	85%	0	0%	29	15%	0	125	64%	69	36%
Unemployed	23	5	22%	0	0%	[illegible]	78%	0	18	78%	5	22%
Unemployment Rate	10.6	2.9		0.		38.3		0.	12.6		6.8	
MARIPOSA COUNTY												
Total Both Sexes, 16 Years & Over	4,535	4,400	97%	17	0%	118	3%	133	2,338	52%	2,197	48%
Total Labor Force	2,244	2,175	97%	0	0%	69	3%	69	1,456	65%	788	35%
Labor Force Participation Rate	49.5	49.4		0.		58.5		51.9	62.3		35.9	
Civilian Labor Force	2,224	2,155	97%	0	0%	69	3%	69	1,436	65%	788	35%
Employed	2,059	2,002	97%	0	0%	57	3%	60	1,365	66%	694	34%
Unemployed	165	153	93%	0	0%	12	7%	9	71	43%	94	57%
Unemployment Rate	7.4	7.1		0.		17.4		13.0	4.9		11.9	
FOUR COUNTY TOTAL												
Total Both Sexes, 16 Years & Over	31,324	30,408	97%	317	1%	599	2%	[illegible]	16,389	52%	14,935	48%
Total Labor Force	15,376	15,050	98%	18	0%	309	2%	813	10,304	67%	5,073	33%
Labor Force Participation Rate	49.1	49.5		5.7		51.6		42.8	62.9		33.9	
Civilian Labor Force	15,325	14,998	98%	18	0%	309	2%	813	10,252	67%	5,073	33%
Employed	13,959	13,722	98%	18	0%	219	2%	726	9,278	66%	4,681	34%
Unemployed	1,366	1,276	93%	0	0%	90	7%	87	974	71%	392	29%
Unemployment Rate	8.9	8.5		0.		29.1		10.7	9.5		77.8	

(4) Summary Manpower Indicators for Tuolumne, Calaveras, Alpine and Mariposa Counties in California, Table 7.

U.S. DEPARTMENT OF LABOR
MANPOWER ADMINISTRATION

RUN DATE - 11/02/72
LAWRENCE BERKELEY LABORATORY

Sex Differences in Participation in Various Industries

The labor force for Tuolumne County as reported in the 1970 Census is made up of 63.18% males and 36.2% females who are 16 years and over. Males predominate in the following industries: Agriculture, forestry and fisheries, mining, construction, manufacturing, transportation, wholesale trade, communications, public utilities and public administration. Females predominate in finance, insurance and real estate, and in the service industries, including personal services, medical and health services and educational services. In the retail trades males and females are more evenly represented.

1970 Census figures for Calaveras County show that 69.9% of the labor force was male while 30.1% was female. Males predominate in all industry classifications with the exception of personal and medical and health services where females predominate. Male and female employment is most nearly equal in the services particularly in the area of education and public administration. A more even distribution will also be found in the retail trades.

Although small in employed persons, Alpine County Census figures show that 64.4% of the work force 16 years and older is male and 35.6% is female. More women than men are employed in retail trade, finance insurance, real estate, medical and health, education and public administration. A greater percentage of males are employed in all other industry classifications.

A greater percentage of males in Mariposa County hold jobs in all industry classifications than do females. The only exceptions are medical and health and education where women prevail. There are more women in the overall service category than males.

Labor force participation rates on the preceeding table indicates that 33% of the total women in the four county labor force, while 67% of the men, participate in the labor force.

The labor force participation rate varies from county to county with Alpine showing a higher participation rate than all other counties in the four county area. The range in percentage of participation for males ranges from 62.2% in Tuolumne County to 86.1% in Alpine County. For females the range is 28.9% in Calaveras County to 45.1% in Alpine County with an average of 36.5%

Sources of Income

Four types of income are reported in Census data. A summary of income sources by type indicates that (1) 59.7% of those employed earned income from private wages or salaries, (2) 25.1% of those employed were paid by governmental sources, federal, state or local, (3) 14.6% of those employed were self-employed, and (4) .9% were unpaid family workers (the highest percentage of these were women).

These figures also show that 95.6% of the wages paid were paid in nonagricultural industries while 4.4% were paid in agricultural industries.

Weeks Worked By Persons in the Labor Force

Utilizing four county averages, Census figures would indicate that 36.8% of the total population were involved in year round or nearly year round work in 1969. An additional 6.6% worked at least half of the year. 15.3% worked 26 weeks or less and were therefore involved in seasonal work. 41.3% did not work at all.

When viewing these figures for individual counties, forty percent or more of the total population 16 or over did not work in 1969 in Tuolumne, Calaveras and Mariposa Counties. Alpine County shows 47.7% of its total population working year round. This percentage is substantially higher than those shown for the other mountain counties. Calaveras and Tuolumne Counties show that approximately 14% of the total population was involved in seasonal employment in 1969. A higher percentage of 21.8% for Alpine County and 17.9% for Mariposa County will be noted. This is directly related to seasonal recreation developments found in these two counties.

Occupations of Employed Persons 16 and Over

As might be expected from the heavy concentration of recreation and tourism related employment, a high percentage of workers are involved in providing services. With the mechanization of the lumbering, construction, and agricultural industries, the number of laborers is small in relationship to other job categories.

Four county averages indicate the following:

Professional, Technical, and related	14%
Nonfarm Managers & Administrators	10%
Sales Workers	5%
Clerical Workers	14%
Crafts, Foremen, and related	14%
Operatives, except Transport	5%
Transport Equipment Operatives	4%
Nonfarm Laborers	7%
Services workers except private house	22%
Private Household Workers	1%
Farm workers - all types	4%
	100%

Characteristics of Those Not in Labor Force

Of those persons 16 years and older in the four county area not in the labor market, 30.5% are sixty-five years or older. 9.2% are enrolled in school and 11.1% are inmates of institutions. This percentage is high in Tuolumne County because of Sierra Conservation Center and in Calaveras County

with the Vallecitos Center. This facility has been replaced with the California Ecology Corp. Disabled or handicapped persons account for 1701 or 10.7% of those not in the labor force.

Travel Patterns of Workers

Census data indicates that 98.4% or 11,057 of the 11,243 persons working in the four county area work in the county of residence. 1.6% or 186 persons commute within the four county area for work. Of all persons residing within the four county area, 811 commute to counties outside the area. The largest number, 472 or 58.2% of the commuting total, reside in Calaveras County.

Residents from other contiguous counties work within the four county area. This number represents approximately 75% of the number leaving the county to work. Since data from counties beyond those contiguous to the four county area was not secured it would appear that the inflow approaches equality with the outflow.

IV. PROJECTION OF MANPOWER NEEDS

The Labor Market Survey conducted by the vocational staff of Columbia Junior College in no way sought information which would allow for projection of future needs. However, in order to undertake long range planning, attention must be given to national, state and local trends which have implications for the future profile of the labor force and for future educational programs.

The Employment Development Department of the State of California recently completed projection of California Manpower, 1972-75. The purpose of the report is to provide projections of occupational trends so that educators, economists, counselors and others concerned with the California Labor Force may have a basis for making decisions. A partial summary of the data follows, and additional information will be found in the report entitled California Manpower - 1972-75.

Projected Employment Levels and Job Opportunities

Average employment in California in 1975 is expected to be 8.75 million, compared with a 1972 average of 8.2 million. Expansion of employment is expected to create more than 550,000 new jobs in the three-year span, and the total number of Californians at work will rise by 6.7%. In addition, about 900,000 persons will leave the State's work force and must be replaced.

As might be expected, the rise will not be uniform over the occupational spectrum. In general, the new job opportunities will be in those occupations commonly known as "white collar" in which the manipulation of concepts and the ability to work with people is more important than manual skills. White collar workers have held over 50% of the jobs in California for more than 20 years, and in 1972 they comprised about 55% of the total. It is anticipated that the relatively rapid growth of white collar employment will continue, and that the number of white collar jobs created in the next three years will be more than double the number of new blue collar jobs.

In absolute terms, the greatest expansion of job opportunities will be for clerical workers. Average employment in this occupational category in 1975 will be 1,681,000, a gain of 118,000, or 7.6% from the 1972 figure.

The greatest rate of expansion is expected to be in employment of sales workers. The 58,000 new jobs that will be created over the three-year period will raise the level of employment in that major occupational group to 728,000 in 1975. This figure represents an increase of 8.7% from the 1972 average.

The growing sophistication of our society is reflected in the prediction that the second largest expansion, in both numbers and percentage change, will be among professional and technical workers. In the decade between 1960 and 1970 employment of these workers grew at about twice the rate of total employment. In the past few years, the rapid rate of expansion has been checked slightly as substantially

lower birth rates since 1960 have affected the growth of employment in educational employment. Other occupations, notably those involved with electronic data processing, have taken up some of the slack, so that between 1972 and 1975, average employment in professional and technical occupations will rise by 111,000 or 7.6%.

It is interesting to note that no occupational group among blue collar workers is expected to increase at so rapid a rate as any occupational group among white collar workers. For the blue collar category as a whole, employment is expected to rise by 135,000, or 5.5% between 1972 and 1975.

The greatest increase in employment of blue collar workers will be among operatives. The growing mechanization and automation of our factories will result in an expansion of employment opportunities for machine tenders, particularly those who work with precision machinery. In 1975 it is anticipated that average employment will be 1,139,000, a gain of 73,000, or 6.9% from the 1972 level.

Changing industrial processes will have their greatest influence on job opportunities for nonfarm laborers and on farmers and farm workers. Employment of the former group will rise by only 12,000, or 3.8%, between 1972 and 1975, while employment of the latter group will decrease. This drop will amount to about 7,000, or 3.1%, of the total number employed at the beginning of the period.

The rate of growth in employment of service workers, 7.3% over the period, will be significantly greater than that for employment as a whole, 6.7%. In California, as in the nation, increasing productivity in goods producing industries, and rising personal incomes have permitted the diversion of increasing numbers of workers to the provision of services.

The most important factor in the growth of employment in service occupations will be increasing numbers working in medical services. For more than a decade, medical services has been one of the fastest growing segments of the economy. Widespread insurance coverage and higher incomes have enabled an increasing proportion of Californians to obtain the medical services they desire, and for those who cannot afford the cost there is increasing subsidization of medical expenses by all levels of government.

In its 1969 report, California Manpower Needs to 1975, the following conclusions were reached:

> The need to provide our emerging work force with appropriate training is only too evident. More people will have to train for longer periods of time if future manpower needs are to be met. Motivating large numbers of young people to prepare for occupations in which the needs will be greatest must be accomplished years before they are actually ready to assume their roles as productive citizens.

Occupations requiring little preemployment training usually have a large surplus of job applicants. With few exceptions, such occupations are growing at a slower rate than the work force, or are actually diminishing. The result of this process is a "job squeeze" among the less fortunate members of the State's work force. Shortages, when they exist among these jobs, will most likely develop in temporary and seasonal work, in menial occupations, low paid work, and in jobs where working conditions are very poor. Such occupations are seldom acceptable as career goals, although they can serve to bridge the gap between having no work at all and the opportunity to earn a rewarding living. The disadvantaged among us, most of whom are already in the labor force, frequently lack the academic training and skills which will be most in demand. Therefore, new programs on a massive scale which will provide for both retraining of skills and remedial training in basic academic subjects appear mandatory. Only in this way will a significant proportion of the disadvantaged be able to compete successfully in tomorrow's labor market. (4)

(4) California Manpower Needs to 1975, October, 1969
State of California, Department of Human Resources Development (Employment Development Department)

V. SUMMARY OF MOUNTAIN COUNTY LABOR MARKET

Scope of the Labor Market

Tuolumne County

During the period of the Tuolumne County Labor Market survey 1018 job titles were identified by the interviewers.

These job titles are divided into specific classifications according to the Standard Industrial Classification Manual. There are a total of forty-nine classifications for Tuolumne County, totaling 764 businesses and 6620 full and part time job slots. In order to gain a better understanding of how these industrial groups have been divided into the Tuolumne County major business groups, these 49 industrial groups have been clustered into fourteen larger groups.

Calaveras and Western Alpine Counties

In Calaveras and Western Alpine Counties 693 job titles were identified by interviewers. Treating them in the same manner as in Tuolumne County reveals a total of 48 classifications totaling 518 businesses and 3635 full and part time job slots. Numbers of businesses and employees divided into fourteen broader business classifications on the following titles more closely relate to the instructional programs offered at Columbia Junior College.

Table XXIV

Standard Industrial Classification Related to Tuolumne County Business Clusters

		# of Businesses	Percentage	# of Employees	Percentage
**	Federal, State and Local Government	15	2.0	1061	16.0
**	*Wholesale and Retail Trade	208	27.2	1059	16.0
**	*Retail Eating and Drinking Establishments, Hotels, Rooming Houses, Camps and Other Lodgings, Motion Pictures and Amusement and Recreational Services	120	15.7	985	14.9
**	*Lumber and Wood Products, Except Furniture	12	1.6	796	12.0
	*Educational Services, including Schools	22	2.9	551	8.3
**	Auto Repair, Printing, Publishing and Allied Industries, Miscellaneous Services and Non-profit Membership Organizations	140	18.3	495	7.5
	*Medical Services	39	5.2	420	6.3
**	Building General Contractors, Construction other than Building Gen Contractors, and Construction Special Trade Contractors	70	9.2	351	5.3
	*Banking, Credit Agencies, Security and Commodity Brokers, Insurance Carriers, Insurance Brokers and Real Estate	62	8.1	348	5.3
	Communications, Electric, Gas and Sanitary Services	10	1.3	347	5.2
**	R.R. Transportation, Local Transit, Motor Freight Transportation and Warehousing, Transportation by Air and Transportation Services	40	5.2	118	1.8
	Agricultural Production, Agricultural Services, Hunting and Trapping, Forestry and Animal Care	10	1.3	45	.7
	Mining, Rubber, Misc. Plastic, Stone, Clay and Glass, Fabricated Metal	6	.8	28	.4
	Legal Services - Local Government not reflected	9	1.2	20	.3
	TOTAL	764	100.0	6620	100.0

* programs currently offered

** recommended for new program development and program expansion and/or diversification

Table XXV
Standard Industrial Classification Related to Calaveras & Western Alpine County Business Clusters

		# of Businesses	Percentage	# of Employees	Percentage
**	Federal, State, Local Government and Schools	33	6.4	918	25.3
**	* Retail Eating & Drinking Establishments, Hotels, Rooming Houses, Camps and Other Lodging Places, Motion Pictures, Amusement and Recreation Services, Museums and Art Galleries	84 150	16.2	573	15.8
**	* Wholesale and Retail Trade	150	29.0	509	14.0
	Mining and Quarrying Non-Metallic Minerals, except Fuels, Stone, Clay & Glass Products	5	1.0	350	9.6
**	Building General Contractors, Construction other than Building General Contractors and Special Trade Contractors	53	10.2	236	6.5
**	*Miscellaneous Services, Printing, Publishing and Allied Industries, Auto Service, Non-Profit Membership Organizations, Personal Services, Misc. Business and Repair Services, and Private Households	82	15.8	222	6.1
	* Banking, Credit Agencies, Insurance Agents, Insurance Brokers and Real Estate	47	9.1	217	6.0
	* Medical Services	18	3.5	192	5.3
**	* Lumber and Wood Products, except Furniture	14	2.7	164	4.5
	Manufacturing, except Lumbering and Non-Metallic Metals	5	1.0	79	2.1
	Communication, Electricity, Gas & Sanitary Services	5	1.0	63	1.6
**	Local Transit, Motor Freight Transportation, Water Transport, Transport by Air	5	1.0	35	1.0
	* Educational Services	1	.2	32	.9
	Agriculture Production, Agriculture Services, Hunting and Trapping	9	1.6	28	.8
	Legal Services	7	1.3	17	.5
	TOTAL	518	100.0	3635	100.0

* programs currently offered
** recommended for new program development and program expansion and/or diversification

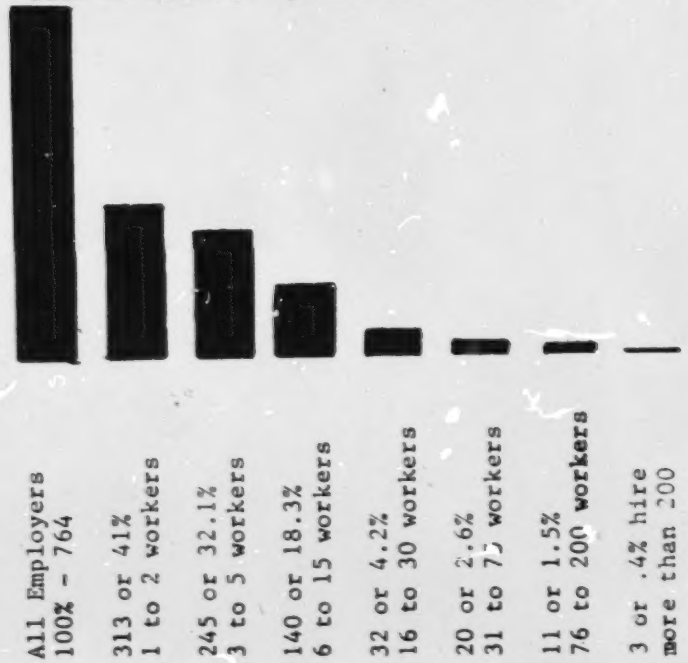
Characteristics of Employers

Tuolumne County

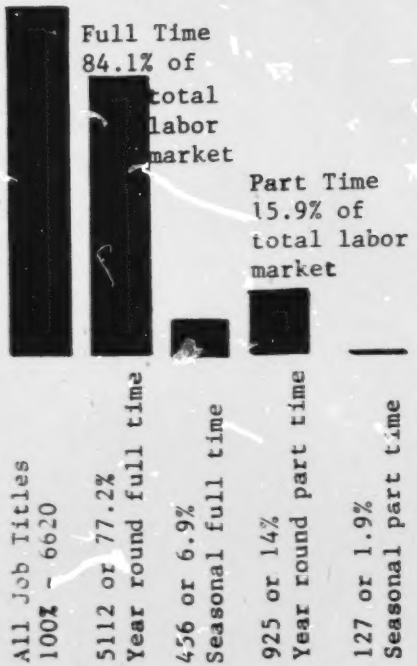
During the Labor Market survey a total of 764 employers in Tuolumne County were identified. It is interesting to note that 41.5% or 313 businesses employ 1 to 2 workers. 32.5% or 245 businesses employ 3 to 5 workers. Thus, most businesses in Tuolumne County can be classified as very small, since 74% of the employers hire 5 or less employees. 4.2% or 32 employers have 16 to 30 workers and are classified as medium-sized businesses. 31 to 75 workers are found in 20 or 2.5% of the firms. 11 or 1.2% of the employers fall into the 76 to 200 classification, and 3 employers hire more than 200 workers. These are found in state and local government and lumber and wood products.

77.2% or 5112 workers of the total 6620 employed are year round full time employees. Full time seasonal jobs will also be found in the labor market. These constitute 6.9% of the total job slots and are found primarily in lumber and wood production and recreation related occupations. Part time employment is found in both the year round and seasonal labor market. 14.0% of the job slots are year round part time and 1.9% are seasonal part time. Thus, 15.9% of the total labor market is involved in part time work. Employers utilize seasonal and part time workers to expand the work force at peak work seasons.

Graph I
Size of Business by Number of Employees



Graph II
Work Year



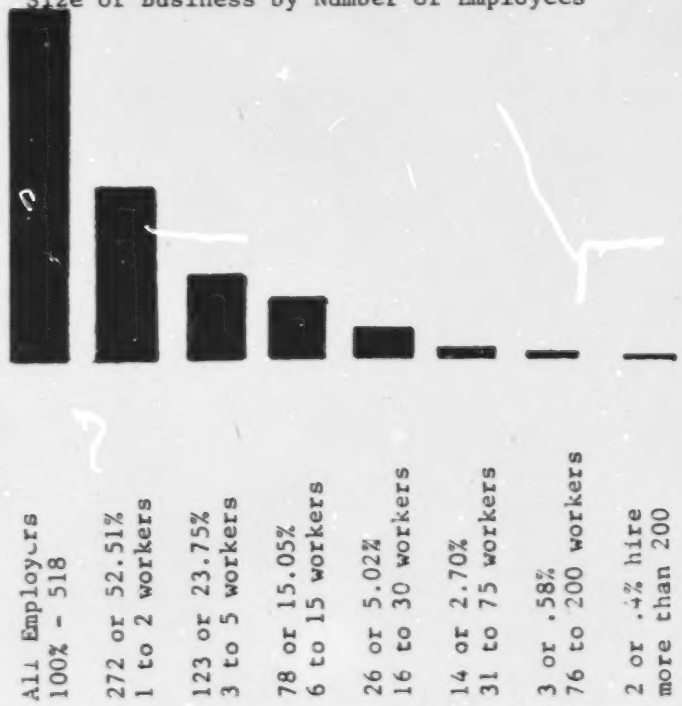
Calaveras and Western Alpine Counties

Employers in Calaveras and Western Alpine Counties are typically small as they are in Tuolumne County. Of the 518 businesses identified, 272 or 52.51% employ one or two workers, and 123 or 23.75% employ from three to five. Thus, 76.26% of the businesses are either owner operated or employ very few workers. The remaining businesses are spread primarily from the 6 to 10 through the 76 to 100 columns. Medium-sized businesses number 26, or 5.02% of all businesses, while the large businesses, from 31 to 500 employees total only 19. Three of the large businesses employ over 100 workers. The mining and quarrying industry has one business with 301 to 350 employees and the remaining large organizations are in state and local government.

2647 or 72.82% of the 3635 workers in the counties are year round full time workers. There are more full time seasonal workers in Calaveras and Western Alpine Counties than in Tuolumne County (10.67% compared to 6.9%), but the year round part time and seasonal part time compare well (14.85% in Calaveras and 15.9% in Tuolumne). As in Tuolumne County, lumber and wood production and the recreation industries account for most of the seasonal job slots.

A detailed summary of employer information for Tuolumne and Calaveras and Western Alpine Counties follows on Tables XXVI and XXVII.

Graph III
Size of Business by Number of Employees



Graph IV
Work Year

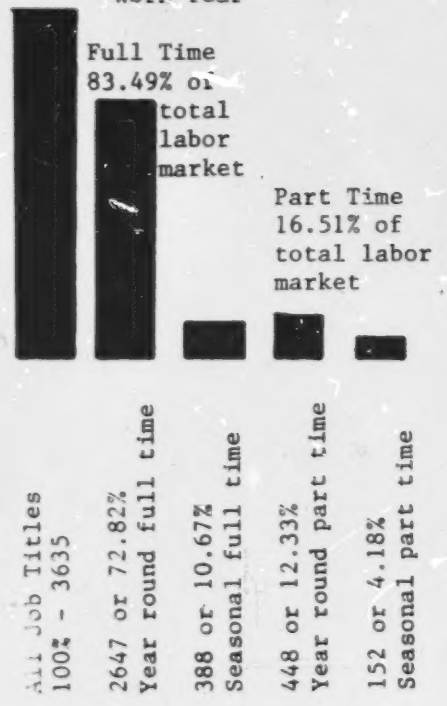


TABLE XXVI

TUOLUMNE COUNTY BUSINESSES BY EMPLOYEE NUMBER

Standard Industrial Classification Number and Description		SMALL				MEDIUM		LARGE												TOTAL # BUSINESSES PER S.I.C. CLASS	TOTAL # JOBS PER SIC CLASS	YEAR-ROUND FULL-TIME	YEAR-ROUND PART-TIME	SEASONAL FULL-TIME	SEASONAL PART-TIME
		1-2	3-5	6-10	11-15	16-20	21-30	31-50	51-75	76-100	101-125	126-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500						
01	Agriculture Production	3	1	1		1														6	34	12		17	
07	Agri. Services and Hunting and Trapping		2																	2	9	5	2		1
08	Forestry	2																		2	2			2	
14	Mining & Quarrying Non-metallic Minerals, Exc. Fuel			1																1	10	10			
15	Bldg. - Gen. Contractors	15	14	1							1									32	99	62	2	33	2
16	Const. other than Bldg. Gen. Contractors	1																		2	15	124	1		
17	Construction - Special Trade Contractors	21	8	6		1													1	39	127	97	11	16	3
24	Lumber and Wood Products, Except Furniture		2		3		1	3	2											[illegible]	198	599	1	192	4
27	Printing, Publishing & Allied Industries	3	2	2																8	100	27	73		
30	Rubber & Misc. Plastics Products	2																		2	4	4			
32	Stone, Clay and Glass Products	1																		1	1	1			
34	Fabricated Metal Prod., Exc. Ordnance, Mach. & Trans.			2																2	13	13			
40	R.R. Transportation						1													1	21	22			
41	Local & Suburban Transit & Interurban Passenger Trans.		1		1															2	19	9	4	6	
42	Motor Freight Transp. & Warehousing	27	2	2																11	67	18	4	45	
45	Transp. by Air	5																		5	7	5	2		
47	Transportation Services		1																	1	4	4			
48	Communication	1	2		1					1	1									5	[illegible]	144	4		
49	Electric, Gas, and Sanitary Services	1	2									1								5	199	197	[illegible]		
50	Wholesale	7	9	1	3															20	86	75	11		
52	Retail Bldg. Material, Hdware & Farm Equip.	4	2	1	2		1	1												16	128	91	2	26	9
53	Retail - General Merchandise	8	4	2	1		1	1												18	132	83	44		5
54	Retail - Food	10	4	7	5	1														27	158	103	50	4	1
55	Auto Dealers & Gasoline Service Stations	13	28	11	11	1														54	238	184	47	5	
56	Retail - Apparel & Accessories	6	15			1														22	99	69	28		2
57	Retail - Furniture, Home Furn. & Equipment	8	7	3	1															19	73	56	16	3	
58	Retail - Eating & Drinking Places	13	20	15	6	3	4													61	434	[illegible]	98	7	7
59	Retail - Miscellaneous Retail Stores	11	13	7			1													32	145	98	[illegible]	2	4
60	Banking				1		2													3	73	61	11	[illegible]	1
61	Credit Agencies Other Than Banks		2																	2	7	7			
62	Security & Commodity Brokers, Dealers, Exchanges	1																		1	1	1			
63	Insurance Carriers	5	2	2	2															11	54	51	3		
64	Insurance Agents, Brokers, and Services	1		1																2	10	10			
65	Real Estate	13	22	5	2		1													43	203	139	56	1	7
70	Hotels, Rooming Houses, Camps & Other Lodging	16	12	6	3	2			1	1										41	304	185	85	16	18
72	Personal Services	22	18	2		1														43	129	96	32		1
73	Misc. Business Services	13	3	2																18	47	36	8		3
75	Auto Repair, Auto Service, & Garages	14	5	3																22	69	67	1	1	
76	Miscellaneous Auto Repair	9	5																	14	28	23	5		
78	Motion Pictures		1																	1	5	4	1		
79	Amusement & Recreation Service, Excl. Motion Pict.	1	5	6		1			1			1								17	242	181	40	13	8
80	Medical and Other Health Services	9	13	3	1						2	1								39	420	315	104		1
81	Legal Services	7	2																	9	20	16	2		2
82	Educational Services-Include Public Schools	5	4	1	1	2	1	6			1		1							22	551	481	69		1
86	Nonprofit Membership Organizations	15	1	1																17	27	20	5	2	
89	Miscellaneous Services	5	7	6	1									1						19	91	66	11	9	5
91	Federal Government														1					1	192	[illegible]	6	26	21
92	State Government			2	1	2		3		1							1			10	476	405	19	32	20
93	Local Government			1				2												4	393	374	19		
	TOTALS	313	249	103	37	16	16	15	5	4	[illegible]	1	1	0	0	2	0	0	1	764	6620	5112	925	456	127
	PERCENT OF TOTAL	40.97	32.07	13.48	4.84	2.09	2.09	1.96	0.65	0.52	0.65	0.13	0.13	0.	0.	0.26	0.	0.	0.13	99.97	100.0	77.22	13.97	6.88	1.92

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Table XXVII
Calaveras & Western Alpine County Businesses by Employee Number

Standard Industrial Classification Number and Description		SMALL				MEDIUM		LARGE										Total # Businesses Per SIC	Total # Jobs Per SIC	Yr-Round Full-Time	Yr-Round Part-Time	Seasonal Full-Time	Seasonal Part-Time
		1 - 2	3 - 5	6 -10	11-15	16-20	21-30	31-50	51-75	75-100	101-125	126-150	151-200	201-250	251-300	301-400	401-500						
01	Agricultural Production	3		1														4	16	13	2		1
07	Ag. Services & Hunting & Trapping	3	2															5	12	8	3		1
14	Mining & Quarrying Non-metallic Minerals, exc. fuel															1		1	334	334			
15	Bldg. - General Contractors	8	3	3	1		1											16	85	44	23	13	5
16	Const. other than Bldg. - Gen. Contractors	1	1		1		1											4	42	11	9	22	
17	Construction - Special Trade Contractors	21	7	3	1	1												33	109	71	12	18	8
24	Lumber & Wood Products except Furniture	4	1	3	1	2	2	1										14	164	89	2	66	7
27	Printing, Publishing & Allied Industries		1	2			1											4	41	35	6		
31	Leather & Leather Products			1														1	8	1	7		
32	Stone, Clay and Glass Products	2	1	1														4	16	14	2		
34	Fabricated Metal Prod. exc. Ordnance, Machinery & Trans.		1		1			1										3	69	61		8	
39	Miscellaneous Manufacturing Industries	1																1	2	2			
41	Local & Suburban Transit & Interurban Passenger Trans.	1			1													2	13	8	5		
42	Motor Freight Transp. & Warehousing				1													1	13	3		10	
44	Water Transportation		1															1	4	2		2	
45	Transportation by Air		1															1	5	4	1		
48	Communication		1															1	4	4			
49	Electric, Gas & Sanitary Services	1	1	1				1										4	59	55	1	3	
50	Wholesale	5	2															7	14	11	3		
52	Retail - Bldg. Materials Hardware & Farm Equip.	7	1		1													9	29	23	5		1
53	Retail - General Merchandise	10	6	2	1													19	58	42	14		2
54	Retail - Food	12	11	4	2	2												31	157	116	39		2
55	Auto Dealers & Gas. Service Stations	11	12	4														27	91	67	23	1	
56	Retail - Apparel & Accessories	2	2	1														5	15	12	3		
57	Retail - Furniture, Home Furnishings & Equipment	5	1	1		1												8	38	34	2		2
58	Retail - Eating & Drinking Places	15	12	12	3	1												43	224	134	48	21	21
59	Retail - Misc. Retail Stores	31	9	4														44	107	80	23	1	3
60	Banking			1	1	1												3	41	35	6		
61	Credit Agencies other than Banks	1	1															2	5	5			
64	Insurance Agents, Brokers & Service	6																6	10	9	1		
65	Real Estate	21	9	2	2		1	1										36	41	35	6		
70	Hotels, Room Houses, Camps, & Other Lodging Places	12	6	3		2		1										24	136	106	20	2	8
72	Personal Services	13	8	1														32	62	47	15		
73	Misc. Business Services	4	1															5	11	11			
75	Auto Repair, Auto Service	10	3															13	25	24	1		
76	Misc. Repair Services	13	2															15	21	18	3		
78	Motion Pictures	1																1	1		1		
79	Amusement, Recreation Svcs. ex. cpt Motion Pictures	5	3	2	1			1	2									14	209	57	11	95	46
80	Medical & Other Health Services	10	6						1	1								18	192	176	16		
81	Legal Services	5	2															7	17	8	9		
82	Educational Services							1										1	32			17	15
84	Museums, Art Galleries Botanical & Zoological	2																2	3	3			
86	Nonprofit Membership Organizations	1																1	1	1			
88	Private Households	1																1	1	1			
89	Miscellaneous Services	5	2	3			1											11	60	49	7	5	
91	Federal Government	3				2	1											6	62	34	20	8	2
92	State Government	2	1			1				1		1						6	255	156	10	87	2
93	Local Government	4	2	2	3	3	2	3	1					1				21	601	516	84		1
	TOTALS	272	123	57	21	16	10	10	4	2		1		1		1		518	3635	2647	448	388	152
	PERCENT OF TOTAL	52.51	23.75	11.00	4.05	3.09	1.93	1.93	0.77	0.39	0.	0.19	0.	0.19	0.	0.19	0.	99.99	100.0	72.82	12.33	10.67	4.18

VI. IMPLICATIONS OF THE LABOR MARKET TO THE VOCATIONAL PROGRAMS OF COLUMBIA

The characteristics of the labor market area into which students from vocational education programs at the College enter are of primary concern in the development and implementation of all training offered. The location, number, work calendar and type of entry level jobs form the basis for the pre-service or pre-employment education programs. It is from these programs that placements of entry level workers will occur. The scope and characteristics of the established career level positions are also important as they govern the in-service training programs to be offered by the College.

Job Titles For Which Programs Now Exist

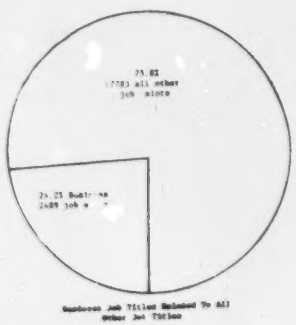
From the labor market survey data it would appear that the initial vocational program development has the potential for providing entry level skill training for a sizeable number of the job titles in the area surveyed. The proposed expansions and modifications will provide flexibility built upon the current instructional base. By developing instructional units which can be incorporated into existing offerings a number of specialized job titles can be served with a minimum of expenditure. Two major curriculum areas appear to be ready for substantial expansion. These are Hospitality and Recreation and Transport and Mechanics. Sales will undergo development during the current year (1974-75) as will Vocational Work Experience. The number of very small employers will limit the potential for cooperative work experience slots so alternate avenues of cooperative programs with local employers will need to be developed. A detailed statement on implications follows.

22

BUSINESS

The Job Market Related to Existing Program

At the present time the Business program of the College offers a variety of courses to meet the needs of employees in business related fields who primarily work in banks, insurance and real estate offices, and government offices. The labor market survey indicates that with the exception of government offices requiring trained personnel with business skills, establishments are primarily small with one to five employees, and thus require a variety of skills.



Clerical

From an analysis of the labor market survey it appears that a fully developed program of pre-service education currently exists to meet the skills required for entry level employment. Clerical workers such as secretaries, tellers and office clerks make up a large portion of the job slots found in the combined labor market area. Clerical skills are also demanded in other job titles as secondary skill requirements.

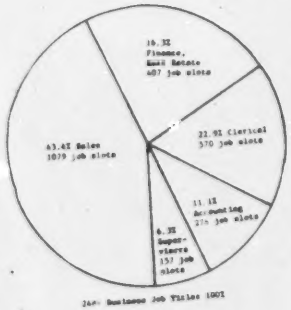
Finance, Insurance and Real Estate

Consistent with statewide employment projections, it will be noted that sixty-two businesses and 348 workers in Tuolumne County and 47 businesses and 217 workers in Calaveras and Western Alpine Counties comprise the large industrial group clustered in Banking, Credit Agencies, Security and Commodity Brokers, Insurance Carriers, Insurance Brokers, and Real Estate establishments. This category accounts for 407 job slots in the labor market area. The majority of these workers are tellers, clerical workers and secretarial workers. The largest single industry in this group is real estate, with 70 offices and 257 job slots, many of which are part time or seasonal.

Supervision

Management level positions total 90 in Tuolumne County and 67 in Calaveras and Western Alpine Counties for a total of 157 job slots. Management skill requirements will also be found in a variety of other job titles which do not have a manager designation in the title.

Management level personnel work primarily full time with very few reporting part time work and almost none reporting seasonal employment. It should be noted that many managers in small businesses are also owners. Supervisory courses at Columbia Junior College are designed specifically for management skills in all fields or for those aspiring to become management level personnel or to strengthen their management skills.



Sales

For all intents and purposes an organized approach to train sales workers does not exist at Columbia Junior College. Two courses in the Business Administration curriculum are listed in the 1974-75 catalog. These are Bus.Ad.10, The Principles of Advertising, and Bus.Ad. 103a,b,Commercial Law. A new staff position to develop this area has been added for the current school year.

Wholesale and Retail Trade includes all businesses involved in retail and wholesale trade, such as building hardware, general merchandise, gas, automobiles, retail food, furniture, household equipment and apparel. In Tuolumne County there are a total of 208 businesses employing 1059, 298 of which are seasonal or part time. Each retail area has about the same total number of businesses, from 16 to 27, except auto dealers and gasoline service stations which total 54 businesses. 153 of the 208 businesses have from one to five employees, while the remaining

have from six to fifty employees.

In Calaveras and Western Alpine Counties there are a total of 50 businesses employing 215, 107 of which are seasonal or part time. Like Tuolumne County, a substantial portion of the 50 businesses have from one to five employees.

From the labor market information, it would appear that there are a wide variety of opportunities in the sales field.

Program Implications Derived from Labor Market Survey

Entry Level or Pre-service Education

1. Secretarial and Clerical

Columbia Junior College adequately covers this area with the present curriculum except for specialized training for medical and legal business employers. These skills could be added to the curriculum by using individualized courses in machine transcription for both areas. The American Medical Record Association has a thorough course which trains medical offices workers (cost $250).

The addition of a cash register is needed for the training of cashiers. This training could be included in Office Practice 130 (130D). Change making should be included in this for cashiers and bank tellers. We should also consider training of resort management majors in simple bookkeeping machine procedures.

The addition of these courses to the existing individualized format would materially expand the training available for a variety of job titles.

2. Bookkeeping and Accounting

This area is adequately covered by present Columbia Junior College curriculum.

3. Sales

Labor market information indicates a strong need to include sales training in the Business Curriculum at Columbia Junior College. Of importance is a general sales course since the sales positions are scattered over many types of businesses. More specialized course work could be developed to include marketing, window display, sales recordkeeping, advertising, use of cash register, business management, parts inventory, and personal sales techniques. The in-service training need survey will assist in identifying additional content areas.

Because of the heavy summer and Christmas season demands particular attention should be given to scheduling sales courses. For entry level students courses should be offered during the Fall and Winter Quarters to prepare students for seasonal work during the summer and pre-Christmas rush seasons. Sales titles show that some jobs (such as sales in lumber, work for agricultural organizations) start the first of June before Spring Quarter is over. Thus, short courses should be considered.

For those already employed particular care must be taken when scheduling courses, partly because of seasonal demands and partly because of the large number of small businesses in which relief personnel are not available.

Career Advancement or In-Service Education

1. Secretarial and Clerical, Finance, Insurance and Real Estate

In-service courses designed to update or give new skills, such as typing, shorthand, machine transcription and accounting for clerical workers could be made available in a number of formats to accommodate the diversity of people requiring skill development. New courses and/or additional instructional units should be developed to meet the expanding demand for trained medical clerical workers and medical records technicians. Courses or units in legal transcription, title examination and title researching should be considered. With the current capability to provide individualized instruction units can be developed to be used as needed on an independent study basis rather than requiring a sufficient sized group to offer the course. This procedure more nearly meets the needs of the local labor market in which only one or two skilled persons are needed at a given time.

2. Bookkeeping and Accounting

In addition to the basic curriculum additional course offerings in cost and income tax accounting are required to further train local bookkeepers. A tax review course should also be considered. Attention should be given to the scheduling of these courses so as not to interfere with peak periods of work activity.

There are 21 seasonal jobs as typists, bookkeepers and accountants during tax season. The College already trains in these areas. These are generally women. Summer courses should be offered in skills other than bookkeeping. Through such skill development these part-time or seasonal workers could expand their potential to do year round work.

3. Supervision

Although the current Supervision Curriculum appears adequate to meet in-service training needs, this program will require thorough review upon the completion of the in-service training study with special reference to the needs of small businesses subject to peak work periods throughout the year. Attention should be given to training business personnel in meeting OSHA standards.

4. Because of the large numbers of jobs related to Public Service attention should be given to the development of a short unit or course that would train students to take county, state and federal tests to qualify for civil service ratings.

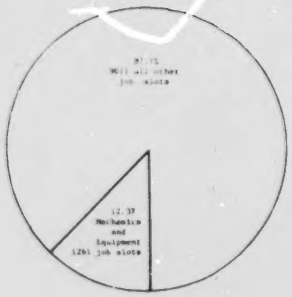
HEAVY EQUIPMENT, MECHANICS AND AUTOMOTIVE

The Job Market Related to Existing Program

Businesses which employ workers in fields related to heavy equipment include construction, special trade contractors and other contractors, fire service, road maintenance, metal and wood producers, auto dealers and service stations and auto repair services and garages. Motor freight transportation and lumber and wood production are also included. 757 workers in Tuolumne County and 470 in Calaveras and Western Alpine Counties are employed in these businesses, many performing jobs such as welding, heavy equipment and auto repairing and equipment operation.

At the present time a full program in Heavy Equipment Maintenance is offered at Columbia Junior College. The operation aspects of the program are currently developed through the apprenticeship training program at Rancho Murietta and are outside the jurisdiction of the College.

To date, program emphasis has been given to Heavy Equipment Maintenance only. The 1974-75 catalog lists 16 courses in the Heavy Equipment Maintenance field. With minor modifications and additions these courses fully meet the demands of the field according to the Labor Market Survey. From labor market visitations, it would appear that automobile mechanics can also be trained with minor modifications to course work. This category includes workers such as service station attendants who may do very light mechanical work to diesal mechanics and other specialists who may work on a single item such as transmissions or generators. There are 355 workers in Tuolumne County and 191 in Calaveras and Western Alpine Counties. Most of these workers are full time. In Tuolumne County 37 are seasonal full and part time and 40 are year round part time, while Calaveras and Western Alpine Counties have 15 seasonal full and part time and 34 year round part time. The businesses employing these workers are primarily small with less than five employees.



Heavy Equipment Operation and Maintenance

Since the inception of the program at Columbia Junior College, program emphasis has been on Heavy Equipment Maintenance rather than Heavy Equipment Operation. An agreement with the Operating Engineers Union to accept students from the maintenance program into the operation program at Rancho Murietta has been entered into by the College. The Regional Occupational Program is developing some equipment operation instruction as a part of its instructional program. This program is offered at and includes operation of crawler tractors and loaders.

No Heavy Equipment Operation Program is now offered. Job titles indicate that 181 operator jobs exist in the three counties surveyed.

Transportation and Trucking

Workers in this category include those employed in railroad transportation, local and suburban transit, motor freight transportation and warehousing and transportation by air.

In Tuolumne County this group totals 39 employers and 381 workers. The largest single industry in this group is log truck drivers, which comprises most of the 51 seasonal and 10 part time workers. In Calaveras and Western Alpine Counties there are 24 employers and 153 workers. The largest single industry in the group is heavy truck drivers.

Program Implications Derived from Labor Market Survey

Entry Level or Pre-Service Education

1. Heavy Equipment

   From the labor market data, it would appear that the current course offerings in Heavy Equipment adequately meet the pre-service training need. The current operation understanding with Heavy Equipment Operators Union should be reassessed to assure students are fully trained for work.

2. Natural Resources Related

   An area which should and is now being organized is an inter-disciplinary course with Natural Resources dealing with timber harvesting and heavy equipment, as related to types of heavy equipment which would be used in logging operations -- log skidder, loader, tree shear, clearing and cleaning. The possibility of requiring heavy equipment students to take courses in aerial photo and mapping (Nat. Res 15), as well as plant identification is being explored.

3. Fire Science Related

Heavy Equipment in fire control (Fire Science 7) should be offered one quarter per year during the day to better serve student needs.

Vehicle caused fire should be included as part of the timber harvesting equipment course; this should be offered by Fire Science.

4. Safety

A unit on California OSHA standards and occupational health and safety should be developed.

5. Heavy Equipment Operation

In order to provide entry level training for job titles for operators of heavy equipment, new course development will be required. Workers in this field will need:

Rules of the road
License course work
First aid
Safety
Basic mechanics & maintenance
Grade
Applied skills

6. Trucking and Transportation

Expansion and modification of maintenance and repair of various trucking equipment and driver training programs are also indicated by the labor market data. This would require curriculum development. Equipment expenditure would be required.

Visitation to other colleges offering this program should be scheduled (College of the Redwoods, College of the Desert). The program can be taught by existing staff. A driving component will be required in the course content. This is a Winter Quarter program.

Career Advancement or In-service Education

More attention to expansion in the night programs to benefit in-service people who cannot attend day classes should be given.

1. In order for opportunities for career advancement to be strengthened, the following additions or modifications of existing course work are required:

a. Heli-arc Welding
b. Advanced Welding
    1. Blue print
    2. Welding symbols
    3. Testing
    4. Basic metallurgy

2. New course work to allow for career advancement is required as follows:

    a. Operation of non-construction equipment including tow truckers
    b. Well drilling
    c. Automotive air conditioning
    d. Automotive disc brakes
    e. Diesel engine maintenance and tuneup

3. The ongoing program could be expanded to offer short term courses such as Water Well Drilling or Tow Truck Operation which would better serve the potential labor force and employees with such needs.

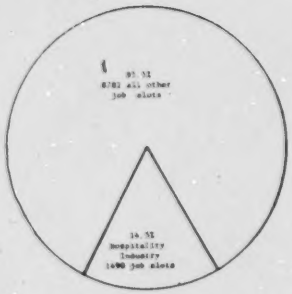
4. Licensure is of importance for transportation workers. Various drivers licenses and union affiliations are required. School bus drivers have mandated training for which classes are now being offered. License renewal is required every 2 to 4 years. Attention should be given to those needing in-service training to improve their driving and safety skills.

All personnel involved with Heavy Equipment have peak seasons during the late spring, summer and early fall because of the weather, which includes construction, lumber production and the firest fire season. Transportation workers and many employees in the lumber production work exclusively during these seasons, while construction and auto service workers have heavy activity during this time as compared to their winter work schedules. Because of these factors, course offerings during the winter would be the most heavily attended.

THE HOSPITALITY AND RECREATION INDUSTRY

The Job Market Related to Existing Program

Job titles in the Hospitality and Recreation area include work done in retail eating and drinking places, hotels, rooming houses, camps and other lodgings, motion pictures and amusement and recreational services. This industrial group roughly comprises the recreation industry in the mountain counties. This curricular area accounts for 14.5% of the total job titles in the survey area.



In Tuolumne County 120 businesses employ 985 workers broken down as follows: 61 restaurants employ 434 workers, 112 of which are part time or seasonal. There are 61 food service establishments in the county, 33 of which employ from 1 to 5, 15 businesses employ from 6 to 10, and the remaining 13 are spread from 11 to 30. Lodging facilities total 41, employing 304, 119 of which are part time or seasonal. Some of these workers are also restaurant employees because many of these businesses have eating facilities. Amusement and recreation services total 17 with 242 employees, 61 of which are part time or seasonal.

In Calaveras and Western Alpine Counties, the recreation industry employs 573 in 84 businesses. Restaurants employ 224 in 43 businesses, lodging facilities employ 136 at 24 businesses, amusement facilities employ 209 in 14 establishments, and motion pictures and museums employ 4 workers in 3 businesses. A total of 121 workers of the 573 in Calaveras and Western Alpine Counties are year round part time or seasonal full time and part time. The majority of these non-year round workers, 90, are employed in the restaurant industry.

An assessment of existing curriculum indicates with the existing course offerings and if currently planned course expansion pertaining to hotel management and food service continues, entry level competence levels can be fully achieved for the following job classifications: motel, hotel and recreational business management; desk clerks and recreation workers.

Full course offerings presently envisioned include:

*Introduction to Hospitality Industry
*Hotel-Motel Management
*Housekeeping
*Front Desk
*Laws of the Innkeeper
*Human Relations in Business
Merchandising the Hospitality Industry
Maintenance and Repair
Sanitation and Safety
Purchase-Storage-Inventory
Cost Analysis
Convention and Group Business
Catering, Banquet & Group Dining
Menu Planning
Restaurant Accounting
Equipment Layout
Beverage Service-Analysis
Procurement, Handling, Purchase of Beverages
Storage, Inventory of Beverages
Food Service Management

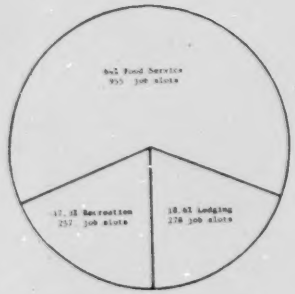
In order for career advancement opportunities to be strengthened, the following additions or modifications of existing course work is required:

Motel & Restuarant Accounting
Security Practices
Sanitation & Safety
Engineering
Maintenance & Repair
Equipment Layout & Banquet
Group Dining & Catering Service

The following new course work is required to allow for career advancement:

Food & Beverage
Marketing

Sales & Advertising
Outdoor Recreation



Program Implications Derived from Labor Market Survey

Entry Level or Pre-Service Education

1. Courses now given, "Introduction to the Hospitality Field, Housekeeping" are adequate for the services - maid, janitor and hostess.

   In the case of Management for Motel, Hotel, Lodgings, the courses "Front Desk, Laws of the Innkeeper, Human Relations in Business, Merchandising and the Hospitality of Industry," should be enriched by on-the-job training with Seminar.

2. Because of the clerical skill requirements, typing, simple accounting, banking, switchboard operation, filing procedures, and perhaps bookkeeping machine operation would fill a need in management, whether in food service or motel management.

3. Courses in Maintenance and Repair, Sanitation and Safety, Purchase-Storage-Inventory, Cost Analysis, Convention and Group Business would help in advancement to the larger metropolitan areas.

4. Courses offered in other curricular areas of the college could strengthen the skills needed for students in the Hospitality curriculum.

5. The recreational and hospitality industry is greatly affected by seasonal conditions. While career level jobs are generally year round, entry level students will probably gain their first exposure to the field by part time or seasonal work. A number of part time, year round jobs

also exist. Many of the larger motels are syndicate owned and managed by husband and wife teams; however, they need replacements and relief staffs.

BUSINESS:
Report Writing, Typing, Filing, Banking & Finance, Bookkeeping Machine
NURSING:
Sanitation & Safety (Fire Safety)
Nutrition (Special Diets)
PSYCHOLOGY:
Inter-person Communication, Social Psychology, Psychology of Leadership, Introduction to Group Dynamics, Personality Psychology
FIRE SCIENCE:
Introduction to Fire Science, Hazardous Material, Fundamentals of Fire Prevention
HEAVY EQUIPMENT:
Maintenance & Repair, Recreation Vehicles
Advertising - Public Relations
P.E. Courses - Individually Oriented
Basic Skills for Service Workers
California - OSHA
Occupational Safety Hazard Act

Career Advancement or In-Service Course Work Implications

1. For the bulk of food service workers -- cooks, bakers, restaurant managers -- courses in Catering, Banquet and Group Dining, Menu Planning, Restaurant Accounting and Equipment Layout would prepare students for careers in this field.

   Bartenders and managers need courses in Beverage Service, Analysis, Procurement and Handling and Purchase-Storage-Inventory.

2. The Travel Industry is another field for future planning.

   Courses in travel planning, local history and points of interest are also needed. Courses in communication and transportation would round out the offering.

3. The relationship of the recreation field with the P.E. Department should be analyzed.

4. In-service courses in resort management, food service and preparation and related areas would be subject to seasonal conditions. Of the 985 workers in lodging, restaurants and amusement facilities, many are subject to both winter and summer peaks. Summer trade, from late spring through early fall, involves week-long heavy tourist business in restaurants and lodging establishments, and winter skiing from November to April keeps many of these same businesses busy during the weekends. Some amusement facilities operate only during one of the seasons, particularly skiing operations, and are closed during the rest of the year, as will be noted from the table below. The most advantageous time for courses would be during the winter from Monday through Friday. Both day and evening courses would allow for the best coverage, as this would be the least busy time.

The implications of this seasonality as it affects students in the recreation and hospitality industry include:

1. The need for on-the-job work experience during Spring Quarter to strengthen possibilities for summer jobs.

2. The possibility to follow winter recreation demands in other labor market areas or work at larger motels in metropolitan areas.

3. Maids and waitresses need to take other courses such as typing, math, bookkeeping or front desk work or management to assure opportunities for year round work.

4. Classroom instruction needs to be able to accommodate open entry, open exit to assure that students don't miss out on jobs which start in Memorial Day weekend.

5. This occupational field offers an opportunity to assist students in both short-range and long-range employment goals.

6. Being a recreation area, students can be employed to finance their education on a part time or seasonal basis.

7. For long-term goals, students can prepare for management, either here or in larger establishments in other labor markets.

AGRICULTURE, FORESTRY, TIMBER AND LUMBERING

The Job Market Related to Existing Program

Businesses and industries which employ workers in these areas include those involved in agriculture production and services, forestry, lumber and wood production and those departments in local, state and national government which maintain state parks and national forests. In Tuolumne County, a total

of 677 workers are employed in these areas, and 155 work in Calaveras and Western Alpine Counties. Many of these workers are employed seasonally. In Tuolumne County, 156 work full or part time seasonally, and in Calaveras and Western Alpine Counties 43 work seasonally. Most of these seasonal workers are non-mill lumber production employees who work in the woods. Only 16 workers in Tuolumne County and 10 in Calaveras and Western Alpine work year round part time. Log truck drivers are not included in this industrial group.

Natural Resources Technology

A full two year certificate program in Natural Resource Technology now exists at the College. Students may elect to specialize in forest practices or in fish and game. Students who successfully complete this program are generally employed in State and Federal Forestry programs and in lumbering.

Forestry

Jobs in this field require a degree from a four year institution with entry often through fire suppression.

Agriculture

Job titles in the broad field of agriculture are limited in Tuolumne County. At the present time no course work in agriculture is offered by the College. A check with the Agricultural Commissioner and Extension Agent indicates that most workers involved in agricultural pursuits are also fully employed in other occupations. As self-employed workers, they are not included in this survey.

Program Implications Derived from Labor Market Survey

Entry level or Pre-service Education

1. Lumbering

   Labor market survey data indicated that there are many jobs in the sawmill and logging industry primarily for which on-the-job training is provided. This is the proving ground to start upward advancement in the industry. Industry is requesting trained people, and even though skills can be learned on the job, a forestry or natural resources background will increase advancement opportunities.

The fast mechanization of this industry makes the task difficult. This mechanization affects all labor positions and is occurring in timber harvesting and manufacturing. Within 10 years new job titles will appear in lumbering. The new course in Heavy Equipment on Logging Equipment proposed elsewhere in this report is a start. During the survey, requests for trained log truck drivers and equipment were frequent.

2. Fire Fighting for Forestry and Natural Resources Technicians

The large number of entry level openings in fire fighting requires expansion of the Wildlands Fire Control course. It needs to be offered during the day as well as at night and expanded to introduction course and in-service course.

The College should offer the pre-employment course required by the U.S. Forest Service, eliminating the need for students to take the course after being hired, creating an expense and time loss. This would entail a consolidation of community programs.

3. Fish and Game

Beyond the technical education courses, increased attention must be given to providing on-the-job training experiences in order that students will be in a better competitive position for the limited number of jobs available in this field. Although a good start has been made in developing cooperative positions, further development must occur.

4. Cal OSHA

All programs should be reviewed to determine where instructional units for meeting Cal OSHA standards should be added to the curriculum. This may necessitate the development of a new course.

5. Seasonal Scheduling

In all lumber related jobs there is no possibility to expand the work year by making training more comprehensive. At the present time all seasonal job titles are summer season only; therefore, there is no possibility of working with another labor market for alternate seasonal needs. All jobs are seasonal only so that year round work would require skill in two or more job categories.

Non-field instruction can be concentrated in the Winter Quarter -- field courses require good weather.

6. Agriculture

At the present time, no courses in Agriculture are offered at the College in either a pre-service or in-service program.

At the present time the number of workers in Horticulture and Animal Husbandry do not warrant curriculum development at the pre-service level. Students should continue to be referred to Modesto Junior College, where a comprehensive program offering exists.

Career Advancement of In-Service Course Work Implications

1. Agriculture

In view of the number of people involved in agriculture on a part time basis, further survey should be done working with the Agriculture Commissioner and Extension Agent to determine the nature of in-service training needs. Upon completion of this study, if courses are warranted, the possibility of utilizing staff from Modesto Junior College and/or community resource persons should be considered. Cooperative programs co-sponsored with local agricultural groups should be explored.

2. Supervision Courses

Since the existing supervision curriculum is of value to Forest Service personnel at the mid-management level, attention should be given to developing closer cooperation between the staff in Supervision and the Natural Resources Technology programs in order to foster a greater degree of cooperative program development tailored to meet the needs of this employee group. This is particularly important since the Forest Service is increasingly interested in utilizing College services for its internal in-service training needs.

3. Lumbering

With this industry currently involved in a high degree of technological change, work with labor management organizations should be strengthened to assure that in-service training needs are met as they are identified.

4. Scheduling Implications

In-service courses which might be of interest to workers in these areas would be necessarily offered in the winter because of the heavy late spring, summer and early fall fire and tourist season. Fire fighters and those working in related fields work long and odd hours whenever needed during the fire season, and lumber and forestry workers put in long hours during the peak tourist and lumber production and land use season. Although most of the workers in these areas

work year-round with the exception of fire fighters, seasonal forest workers and some lumber production workers not employed in the lumber mills, winter course offerings would be the most advantageous.

HEALTH OCCUPATIONS

The Job Market Related to Existing Program

At the present time, Health Occupations offers the Licensed Vocational Nursing program at the pre-service level. Students wishing to enroll in the Registered Nursing program are referred to Modesto Junior College. The Medical Services Industry includes hospitals, doctors and dentists. A total of 420 work in 39 establishments, 306 or 73% in the 3 local hospitals. Tuolumne General Hospital, generally considered as part of local government, is part of this group. The remaining 114 workers are the doctors, dentists and medical help in the individual offices. In Calaveras County a total of 198 work in 20 establishments, of which 154 or 80% work in local hospitals. The remaining 44 workers are doctors, dentists and medical help in individual offices. Labor market surveys show a total of 69 job slots for L.V.N.s and 119 job slots for R.N.s. This area accounts for 573 of the total job slots surveyed.

The only pre-service program offered at Columbia Junior College is for licensed vocational nurses. The training needs of nursing aides can also be served. In-service training courses for Registered Nurses and Emergency Medical Technicians are regularly offered in the Continuing Education Program at the College. Programs for R.N.s are developed at the request of the Health Occupations Advisory Committee and are usually designed to update knowledge and procedures of currently employed staff. An 80 training program to qualify for licensure for Emergency Medical Technicians is offered on a regular basis in cooperation with the Comprehensive Health Planning Council. Other community based in-service courses are offered through the Bi-County Nursing Program and through various professional societies. Correspondence courses for R.N.s seeking the B.S. degree are available through the State College and University system. A growing number of job titles required periodic training programs to update staff. While professional level staff such as doctors, dentists and pharmacists enroll in courses outside of the community the college must be ready to develop programs to meet the mandated training needs of all levels of nursing staff and allied health personnel.

Program Implications Derived from Labor Market Survey

Entry Level or Pre-Service Education

1. Nurse Aide and Home Health Aide

A nurse aide program should be reinstituted. This course could possibly become a part of the first quarter of the L.V.N., as a core program. It could be a one quarter certificate program. After the first core quarter a specialty program should be seriously considered such as home health aide, geriatric nursing and/or occupational therapist.

2. Inhalation Therapy and Dental Assisting

A certified accredited program for inhalation therapist and dental assistant should be seriously considered since job opportunities are expected to be excellent through the mid 1980's.

3. R.N. Program

We should continue to make an attempt to articulate our vocational nurse program with the two year registered nurse program in Modesto, because hospital census as of this date does not justify instituting a registered nurse program.

4. Limited Job Opportunities

It would not be feasible to offer surgical technician training because job opportunities are not available in this area at the present time.

Job opportunities are limited in the following job titles:

X-ray technologist
Medical lab assistant
Medical technologist
Medical assistant

5. Environmental Health

Labor market predictions indicate that environmental control measures are expected to command a steadily increasing share of State and local expenditures as public concern about ecological health and safety accelerates (4). To date, the College has offered short courses in water treatment plant operation in conjunction with the Tuolumne County Department of Public Health on a periodic basis.

(4) The U.S. Economy in 1980, page 8.

With the move toward a county-wide waste water treatment system and a county waste disposal program, a careful analysis of projected training needs should be undertaken in the near future.

Career Advancement or In-Service Course Work Implications

1. Coronary Care and Intensive Care

It is probably not feasible to initiate coronary or intensive care for licensed vocational nurses or registered nurses because of the limited need in this area. Continued appraisal of this job market should be maintained. As soon as the state wide and local picture develops we should move into this field.

2. Emergency Medical Technician

Emergency Medical Technician training will be continued on an as needed basis to meet mandated training requirements. Recent legislation indicates the need for a 24 hour refresher course to be established in the near future.

FIRE SCIENCE

The Job Market Related to Existing Program

From an analysis of labor market survey information, it would appear that the current level of program offerings are adequate to meet the local labor market needs.

In contrast with other occupational areas, few paid positions exist in the local labor market. The new Cal OSHA overtime restrictions should increase entry level positions in this field.

In addition, job titles requiring training in Fire Science will be found in the Heavy Equipment and Forestry and Natural Resources clusters. Fire-fighting positions are frequently entry level for careers in forestry and natural resources. They are basic to work in lumbering because of the high incidence of fire hazards. All heavy construction jobs require fire fighting capability and heavy equipment operators are frequently involved in fire control in the mountain areas. Airborne fire fighting is also becoming more frequently used. Heavy dependence on volunteer firemen in mountain communities mandates continued specialization within the Fire Science curriculum.

A check of the Columbia Junior College catalog indicates that eleven courses are now offered in Fire Science. These offerings meet a substantial portion of the local need.

As noted on the Forestry and Natural Resources section, with additions and modifications to the existing Fire Science Program specialization in Fire Control in Wildlands could be strengthened.

The existing course offerings and opportunities for on-the-job experience in the College Fire Services provide excellent job training for students wishing to become firemen in metropolitan areas and is thus a good program for the broader labor market. Pay rates at the entry level substantially exceed minimum wage and employment opportunities are excellent. Median earnings are $11,600 for year round workers.

With the heavy emphasis on volunteer firemen to serve rural areas, continued offerings to meet the in-service training need is mandatory. As volunteers are trained in basic skills, more specialized training courses will be developed.

Program Implications Derived from Labor Market Survey

1. Heavy Equipment Related

   Fire Science 120, Heavy Equipment in Fire Control, should be offered during the day one quarter per year to better serve student needs.

   As part of the timber harvesting equipment course a unit on Vehicle-caused Fires should be included in the course content. This unit should be concerned with mufflers, extinguishers, etc. It should be taught by the Fire Science instructor.

2. Firefighting for Natural Resources Technicians

   The large number of entry level openings in fire fighting requires expansion of the Wildlands Fire Control course. It needs to be offered during the day as well as at night and expanded to introduction course and in-service course.

   The College should offer the pre-employment course required by the U.S. Forest Service, eliminating the need for students to take the course after being hired, creating an expense and time loss. This would entail a consolidation of community programs.

3. Interdisciplinary Offerings

   Instructors in Fire Science, Heavy Equipment and Natural Resources Technology should review the core content work done for Indian Students in Mountain Oriented Occupations in 1970-72 to determine if team teaching in fire related areas is now feasible.

4. Continued attention to the needs of volunteer fire departments should be given. The current practice of outreach or field training should be strengthened.

5. Entry level training for the broader labor market should be maintained. Additional opportunities for on-the-job training such as now being offered at Tracy Defense Depot should be found to assure that students completing the pre-service program are fully qualified to a variety of assignments.

Characteristics of the Labor Market for Which Instructional Programs Do Not Exist

The foregoing section has concerned itself with job titles and occupational clusters for which training now exists or could be easily provided with minor adjustments to the existing labor market. This accounts for a total of 9696 job slots, or 75% of the 13,147 total job slots identified in the area surveyed.

TEACHER AIDE

The Job Market Related to Existing Program

From an analysis of the labor market survey, it would appear that the current level of program offerings are adequate to meet the local labor needs. At the time of the survey 20 positions existed in Tuolumne County and 35 existed in Calaveras and Western Alpine counties. Since these positions result for the most part from state and federal funding and volunteers are used, long range planning is difficult.

Program Implications Derived from Labor Market Survey

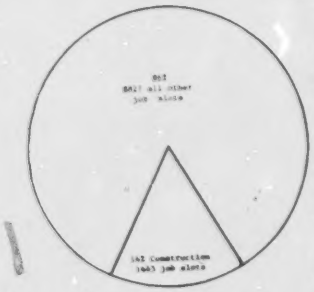
Because of the funding sources continuing coordination with County Schools offices is imperative to assure that training keeps pace with the funding of job slots and that trained aides are given preference over untrained aides in hiring practices.

Continued cooperation with teacher training programs from four year institutions is required to be sure teachers and aides are trained as a team.

This section will concern itself with the balance of the job titles and occupational clusters.

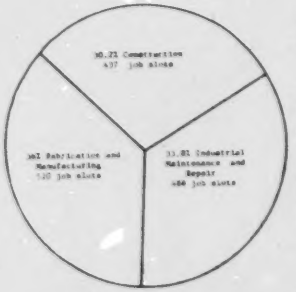
1. Job titles and occupational clusters with potential for future program development.

CONSTRUCTION, MANUFACTURING, AND INDUSTRIAL REPAIR AND MAINTENANCE



In Tuolumne County this group of 70 employers and 351 workers consists of mostly small businesses with one large employer, George Reed Co., employing 124 workers. Of the 32 general contractors, 29 employ from 3 to 5 people; a total of 62 work full time, while 37 are seasonal or part time. The special trade contractors such as plumbers, electricians and back hoe operators total 36 businesses employing 127, 30 of which are seasonal or part time. In Calaveras County, there are 52 employers with 235 workers.

Since all mountain counties are experiencing a high rate of populations growth, statewide manpower projections would seem particularly pertinent in this geographical area. Therefore, continued attention should be given to the development of a vocational program for workers in these clusters.



A large number of job slots exist in the Construction and Industrial Maintenance and Repair occupational clusters.

The limited information derived from this labor market survey must be supplemented by further study before such a program is started.

Construction 437

Fabrication & Manufacturing 83

Industrial Maintenance & Repair 488

In order to train entry level workers to enter construction or industrial maintenance and repair fields, the few program fragments currently offered would require coordination and new course work would have to be developed as follows:

For Mechanical Maintenance: special tools, safety, pumps, welding, hydraulics, electrical, and on-the-job training opportunities.

For various Electrician job titles: basic electronics, tools, soldering, blueprint reading, specifications, theory, safety, and on-the-job training opportunities.

For Plumber: tools, water hydraulic, chemicals, and code.

For Building Maintenance Workers: general tool handling, repair, and basic code.

For Carpenters and Cabinetmakers: tools, blueprint reading, and basic code.

For Sheet Metal Workers: code, tools, safety, blueprint reading and metals.

From the data it appears that opportunities for advancement within local industries occur through retirement or relocation. Populations growth also affects the construction trades. Workers can advance locally within the trades.

Licensure is of importance within many of the job titles found in these occupational clusters. Union membership is an important passport to work. This would imply that the College move more aggressively to work with unions in developing training programs.

An assessment of wage information by job title indicates that all workers in these two occupational clusters have a median earning capacity which exceeds the minimum wage by 10% or more.

However, it should be remembered that seasonality is an important factor in the construction trades. Heavy construction is subject to weather conditions. Dwelling construction is heaviest during periods of good weather. Maintenance and repair job titles are also subject to heavier work schedules during the summer months when the population is largest. Because of these factors it would appear that course offerings during the winter months would be the most heavily attended.

Program Implications Derived from Labor Market Survey

Expansion and modification of the existing fragments pertaining to Construction and Industrial Maintenance and Repair programs are also indicated by the labor market area. This would require

curriculum development, and should be based on in depth study and work with advisory committees with field experience in these trades.

Close coordination with building trades to determine needs and establish needed courses must be continued. Cooperation is under way with Tuolumne County Contractors Association and the Operating Engineers Union and must be strengthened. Other organizations should be involved.

Training for many jobs would require no change in facilities now serving the existing program, and community resources staff can be found. Immediate attention should be given to developing training courses in meeting the requirements of the California Occupational Safety and Health Act.

ADMINISTRATION OF JUSTICE

Labor market survey data reveals that a total of 302 job slots in the field of the Administration of Justice were found in the three county area surveyed. With the inception of the Regional Criminal Justice Education and Training Center at Modesto Junior College, all responsibility for providing training in this field was transferred to that agency. With the termination of federal funds and the necessary curtailment of non-ADA producing outreach services and a cutback of departmental training funds, it would appear that the time has come to consider reinstitution of the program through Columbia Junior College in order that training opportunities can be provided closer to home.

2. Job titles and occupational clusters for which training programs are not now recommended:

PRINTING

Labor market data reveals a total of 13 printing positions in Tuolumne County and 10 in Calaveras and Western Alpine Counties. This does not indicate sufficient need to warrant a training program. Because Modesto Junior College has an extensive offering in the Graphic Arts, it is recommended that all students interested in pursuing a printing career be referred to that institution. Should a specialized need of an in-service nature arise, arrangements can be made with the community resource instructors or staff from Modesto Junior College to offer needed training.

EDUCATIONAL SERVICES, FEDERAL, STATE AND LOCAL GOVERNMENT

The largest employing industry in the county is government, including public education. 1612 employees work at 37 different schools and offices. The breakdown is as follows: 192 work for the Federal government in the forest service; the State government employs 476 in 10 offices, including the Division of Forestry, Employment Development Department, Highway Patrol and Department of Motor Vehicles. Local city and county government employs 393 in 4 areas, including the City of Sonora and Tuolumne County. Educational services employ 515 in this county with 21 schools and the Superintendent of Schools office.

In Calaveras and Western Alpine Counties this group includes 62 employed by the Federal government, 255 by the State government and 601 employed by city and county government.

Program Implications Derived from Labor Market Survey

PUBLIC ADMINISTRATION

Positions in this cluster are usually governed by civil service or elected. Most of the training needs of this group can be handled through existing course offerings or by programs offered by other institutions and agencies. For this reason, specialized program development is not recommended at this time. One exception to this recommendation is on page 82, relating to the institution of a short unit course that would train students to take county, state and federal tests to qualify for civil service ratings.

EDUCATION

Because professional educators require the four year degree and additional professional work towards certification specialized training programs are assigned to four year institutions and are outside of the province of community college vocational programs. An exception to this is the instructional aid classification which is covered on page 40 of this summary.

COMMUNICATION, PUBLIC UTILITIES AND SANITARY SERVICES

Of the 10 businesses employing 347 workers in this group, Pacific Telephone & Telegraph, Pacific Gas and Electric Company and Hetch Hetchy comprise 316 of the job slots. The remaining 31 are from various small businesses such as refuse services. In Calaveras and Western Alpine Counties four businesses employ 59 workers in this group.

Program Implications Derived from Labor Market Survey

COMMUNICATIONS

This industrial group is made up by job titles requiring a wide diversity of skills which do not lend themselves to a cohesive training program. Some jobs are civil service. Most will be filled with skilled personnel transferring into the community. No training program is considered for this group at the present time.

UTILITIES

At the present time entry level jobs into openings in the utilities field usually occurs from out of area transfers within the parent company. With Pacific Telephone, Pacific Gas & Electric and the City and County of San Francisco administering the greatest number of job titles, transfers

in are fairly frequent. As will be noted elsewhere in this report, these companies maintain their own training programs. As a result of the in depth study of in-service training needs by the College in 1974-75, implications for program development in this occupational cluster may emerge.

CIVIL ENGINEERING AND SURVEYING

The field of civil engineering requires the four year degree and advance professional training. Training for this occupational group is therefore outside the realm of the College. A two year technical engineering program now exists at Modesto Junior College and students desiring to enter this field should continue to be referred there. At the present time there are a small number of entry level openings in Architectural Drafting. It would not appear that program development is warranted at this time. This should be reconsidered in light of construction program development. Surveying requirements within forestry and natural resource related job titles are now adequately handled by current course offerings.

PERSONAL SERVICES

This varied group of businesses makes up a large part of the service industries not tied to other specific groups. 126 job slots exist in 46 firms in Tuolumne County. In Calaveras and Western Alpine Counties 118 job slots were found in 50 firms.

The most dramatic change in industry employment in recent years has been the employment shift towards service-producing industries. Shortly after the turn of this century, only 3 in every 10 workers were in service industries. By 1950, the weight had shifted to just over 5 in every 10 in service industries; by 1968, the proportion had inched to 6 in every 10. In 1980 close to 7 in every 10 workers are projected to be in service industries.

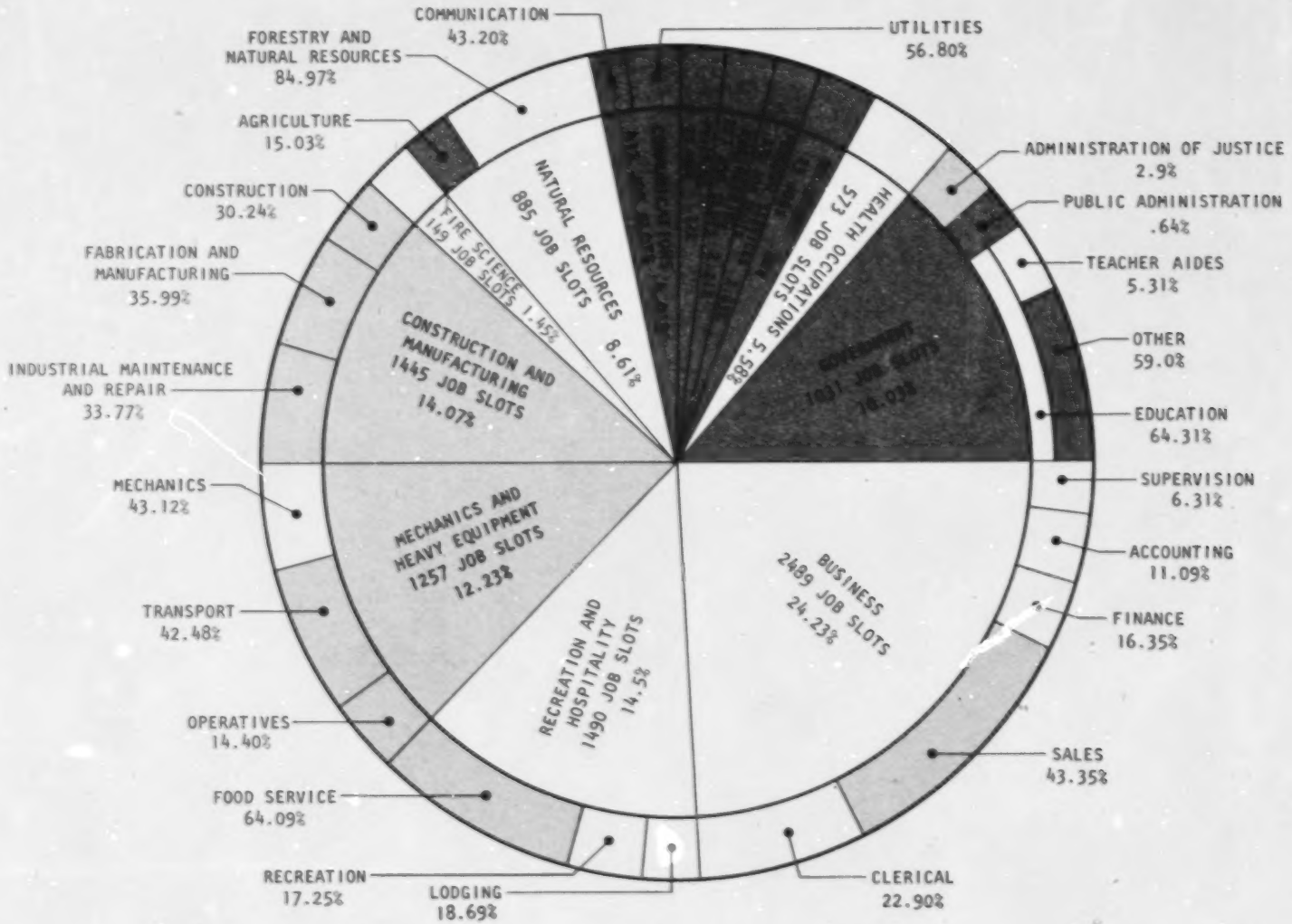
The general population increase and rising per capita income in the three county area would seem to imply that employment opportunities will also increase in this area.

RELIGIOUS SERVICES

A total of 23 paid job slots in religious services are found in the three county area. Because training for such positions is outside of the purview of the community college, no program is recommended.

VII. SUMMARY OF JOB MARKET BY CURRICULAR AREA BY COUNTY

The circle graph below graphically illustrates the total number of job slots by curricular area as related to the instructional programs at Columbia Junior College.



Program exists or existing program can be modified

Recommended for program development

Not recommended for program development

Percent of total job slots
by curricular area
10,274 total job slots = 100%

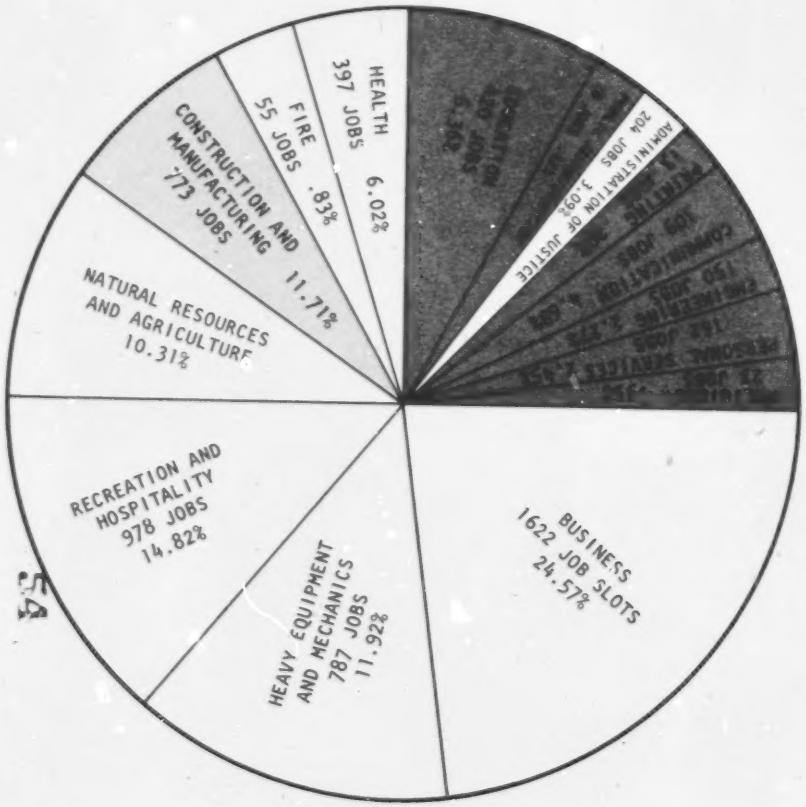
The unshaded area represents 3981 job slots, or 38.75% of the total for which occupational training is now provided or could be easily provided with minor adjustments to the existing instructional program.

Job slots recommended for new program development are represented in the lighter shaded areas. These account for 4496 job slots or 43.76% of the total.

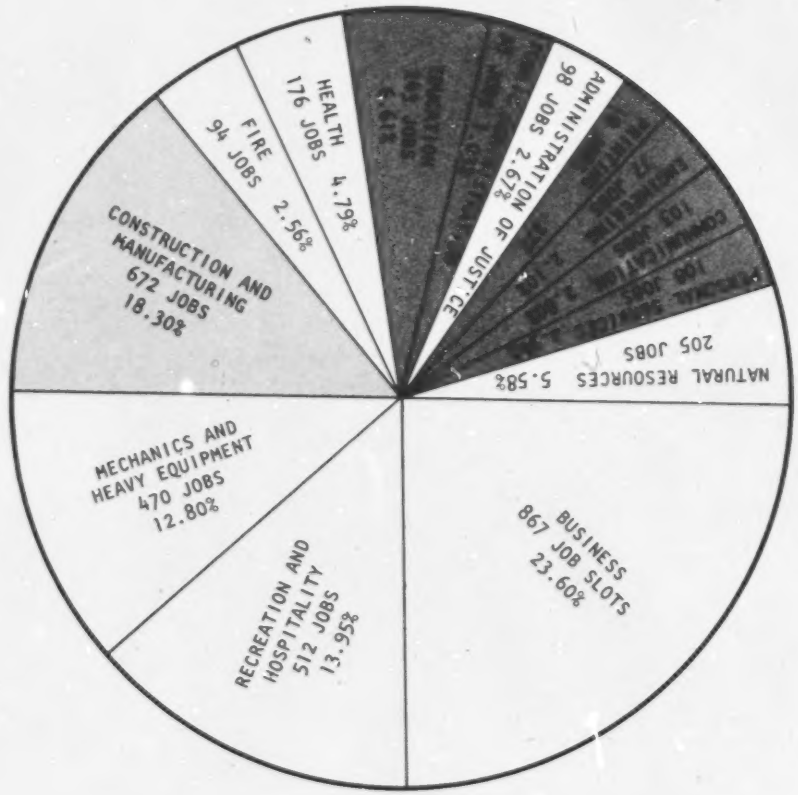
Job slots for which program development is not recommended at this time account for 1797 job slots or 17.69% of the total. These are shown in the darker shaded areas.

A breakdown by county shows a slightly different picture:

Tuolumne



Calaveras & Western Alpine



Program exists or existing program can be modified

Recommended for program development

Not recommended for program development

The greatest difference between the two counties lies in greater construction and manufacturing in Calaveras County and heavier concentration in Forestry and Natural Resources in Tuolumne County. Other than these fields, the breakdown of the labor market in the two counties is essentially the same.

A Vocational Education Project under the Vocational Education Amendments of 1968.

PL 90-576 Part G

Fiscal Year July 1, 1972 - June 30, 1973

Fiscal Year July 1, 1973 - June 30, 1974

UNIVERSITY OF CALIF.
LOS ANGELES

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